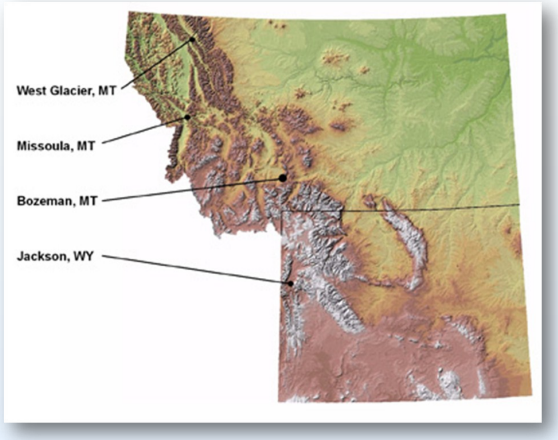
Northern Rocky Mountain Science Center (NOROCK)

NOROCK is part of the Rocky Mountain Area of the USGS, Department of the Interior. NOROCK Scientists work in the northern Rocky Mountains of the United States and throughout the western U.S., as well as throughout the world on issues as diverse as global climate change, ecosystem science, fire science, wildlife diseases, aquatic ecology, invasive species, bison ecology, and large carnivores. We work with partners from various federal and state agencies, universities, and non-governmental organizations throughout the western United States and Canada.



NOROCK headquarters is located in Bozeman, Montana with scientists working out of three field stations in Montana and one

Mission

The mission of NOROCK is to produce and disseminate scientific information needed to manage and restore the ecosystems and associated plant and animal communities of the Northern Rockies through research, information transfer, and a collaborative approach to problem solving.

Our Science

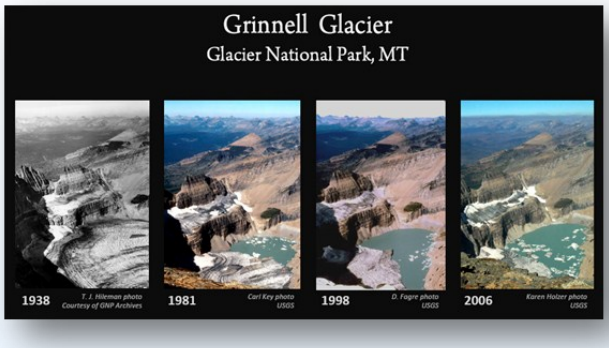
The Northern Rockies are blessed with an abundance of plant and animal species which have remained relatively intact since the Lewis and Clark expedition in the early 19th century. However, population growth, re-emergence of the energy industry, increasing demand for water and natural resources, and global climate change is changing the landscape of the Rockies. NOROCK scientists are working on research projects that will provide managers with information related to species habitat needs and how landscapes changes can affect the Northern Rocky Mountain ecosystems.

Partners: We work with partners from the Department of the Interior including the Bureau of Land Management, Bureau of Reclamation, National Park Service, and the U.S. Fish and Wildlife Service, as well as other federal agencies such as the U.S. Forest Service and Department of Energy. We also work in collaboration with resource agencies in Canada and state agencies throughout the western United States. We are hosted by Montana State University where we jointly co-sponsor the Mountain Prairie Information Network as part of a national information network to provide timely natural resource information.

Visit us at http://www.nrmsc.usgs.gov

In 2007, the USGS developed a new science strategy outlining major natural-science issues facing the Nation and focusing on areas where natural science can make a substantial contribution to the well-being of the Nation and the world. These areas include global climate change, water resources, natural hazards, energy and minerals, ecosystems, and data integration. Science accomplishments of NOROCK are based on government goals specific to protection and conservation of natural resources and fall under these new programming areas. Our Center function and biological science focuses around four main themes: Climate Science, Land Use Change and Decision Support; Terrestrial Ecosystems; Aquatic/Riparian Ecosystems and Water; and Operations and Communications.

Climate Science, Land Use Change and Decision Support:



The increasing pressure of private land development adjacent to public lands, expanding energy production, and continued commodity extraction on world class wildlife resources requires more complicated analyses to identify potential consequences and trade-offs of management alternatives. Couple that with global climate change, and managers face unprecedented challenges in the management of natural resources. We work collaboratively with managers in the northern Rockies and elsewhere to evaluate these changes and predict their impacts on terrestrial and aquatic ecosystems. We work closely with the Great Northern Landscape Conservation Cooperative and the Plains and Prairie Pothole Landscape Conservation Cooperative to cooperatively identify needed research and to help translate this research in ways that are useful to managers. We are developing models and decision support tools that use this information to display the effects of management alternatives on the resource goals identified by managers and the public.

Terrestrial Ecosystems:

The Northern Rockies are blessed with an abundance of plant and animal species that have remained relatively intact since the Lewis and Clark expedition in the early 19th century. Energy development, increasing human population pressures, and the continued demand for more water make the management of wildlife more complicated than ever. We work with partners to study key life history and habitat needs of these species. Our scientists develop work on a variety of research topics including wildlife habitat and population modeling, wildlife disease, ungulate browsing effects on vegetation, and plant community and habitat interactions.

Aquatic/Riparian Ecosystems and Water:

Native fish and amphibian populations have declined drastically throughout North America over the past century as a consequence of habitat degradation and nonnative species introductions. Although management actions have improved the probability of persistence of the these taxa in some areas, recent invasions of nonnative species (e.g., lake trout, rainbow trout, New Zealand mud snails, bull frogs, and Asian carp) present challenges to the persistence of native species. We work closely with managers to understand the most pressing management issues and to develop research that supports their efforts.

Operations and Communications:

To ensure the efficiency and efficacy of our science, our Operations staff works directly with Center researchers to help meet the functionality and staffing needs of each program. In addition, the Science Information and Education Team ensures that Center science is highlighted and accessible in various media formats and "stands-out" to both regional and national audiences.

The Northern Rocky Mountain Science Center is located in Bozeman, Montana and includes three field stations in Montana and one duty station in Wyoming. For more information on NOROCK's research, please visit http://nrmsc.usgs.gov or contact the Center Director: Jeff Kershner 406-994-5304 or